

The Tasmanian records of the Fertile *Caladenia prolata* D.L. Jones

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Abstract

In late 1998 the first Tasmanian record of the Fertile *Caladenia prolata* D.L. Jones was made in a gully on the western slopes of Strzelecki Peaks in the Strzelecki National Park on Flinders Island. The locality is described below, later searches from 1999 to 2006 are dealt with, an estimate of the number of plants given, and a threat to the major site is discussed. As the taxon is scheduled as 'endangered' under the Tasmanian *Threatened Species Protection Act 1995*, the exact localities are not given here but are detailed on the specimens' labels. (*The Victorian Naturalist* 129 (4), 2012, 144–146)

Key Words: Flinders Island, Fertile *Caladenia*, *Caladenia prolata*, endangered Tasmanian plant

The discovery in 1998

The western slopes of Strzelecki Peaks have been seriously damaged by bushfires. A gully of the slope still has a dominant layer of White Gums *Eucalyptus viminalis* and Tasmanian Blue Gums *Eucalyptus globulus* subsp. *globulus* but its understorey has, in the main, been replaced by Stinkwood *Zieria arborescens* with a lower layer, often dense, of Tall Cutting-rush *Lepidosperma elatius*. A granite jumble, up to 6 m deep, runs from this gully to just past a tributary gully, not far upstream from their confluence. The jumble, which includes some bedrock at its uphill edge, carries a few remnant rain-forest shrubs. There are four Hazel Dogwood *Pomaderris apetala*, one Banyalla *Pittosporum bicolor*, and several Prickly Currant-bush *Coprosma quadrifida*. The jumble supports just one small White Gum. The fringing Blue Gums and White Gums overhang parts of its edge.

In November 1998, some orchids, thought by the length of their leaves when found three months previously to be a Sun-orchid *Thelymitra* sp., were checked in the jumble. The buds showed them to be a *Caladenia* species. Their green colour was novel to the author and five plants, less corms, were posted fresh to David Jones at the Australian National Herbarium in Canberra. He determined them as *Caladenia prolata*, an Australian mainland species not recorded previously in Tasmania.

Twelve of the plants grew on the steep (about 70°) east north-easterly face of a slab 5–6 m above the base of the jumble. They rose from a mat of Common Filmy-fern *Hymenophyllum*

cupressiforme (main species) and the ground lichen *Cladia aggregata*. There was one more plant on a level block at the base of the face. The canopy of the one adjacent Hazel Dogwood extended to just past the site. Two lower Prickly Currant-bushes reached to just above the edge of the slab and the block at its base. The nearest other shrub, growing from soil by the edge of the jumble, was a Native Hop *Dodonaea viscosa* var. *spatulata*. The nearby herbs of the jumble included Biserrate Fireweed *Senecio biserratus*, Fireweed *Senecio linearifolius*, Scrub Nettle *Urtica incisa*, Sickle Fern *Pellaea falcata* and Streaked Rock-orchid *Dockrillia striolata* subsp. *striolata*.

Specimen

12.xi.1998, gully of western slopes of Strzelecki Peaks, Flinders Island. John Whinray No. 10601, Australian National Herbarium CANB 669287.

Later records at the initial locality

25 June 1999: 12 leaves on the slab; none on the block at its base.

27 November 1999: 'not a sign of the orchids.'

2 October 2001: six budding plants on the slab.

27 October 2002: eight leaves on the slab and one on the block at its base.

15 October 2005: none under the dense Scrub Nettle on the slab; two leaves on the slab at its base.

5 October 2006: no plants on the slab when the Scrub Nettle was removed; none on the block at its base.

Nearby records

On 5 October 2006, six *Caladenia* plants were found just north of the northwestern corner of the granite jumble. They occurred in 1 m × 3 m of soil that had not been nuzzled by the pigs. The understorey, which started by a seasonal spring just west of the spot, was Rough Tree-fern *Cyathea australis* over Soft Tree-fern *Dicksonia antarctica*. Nearby, in about 20 m by up to 15 m of damp to very wet ground on either side of the spring, were at least 92 *Caladenia* plants, making this the major site. White Gums were the main dominant and a Blue Gum the minor dominant of the locality. There were no shrubs. The first understorey layer was Rough Tree-ferns; there were Soft Tree-ferns below them. Much of the ground was bare of other plants but the orchids extended into Tall Cutting-rush near the head of the spring. The extra plants brought the local total to at least 98.

Two specimens were taken at the major site on 14 November 2006 and forwarded fresh to the Australian National Herbarium. Both were determined as *Caladenia prolata*. Three budding *Caladenia* plants were taken at the same site on 25 November 2006 and, like the prior specimens, were sent to David Jones in Canberra. They were named as one *C. prolata* and two Summer Fingers *C. vulgaris*.

Specimens

14.xi.2006 In a gully of the western slopes of Strzelecki Peaks, Flinders Island. John Whinray No. 12946 *Caladenia prolata*, CANB 740504; same locality, John Whinray No. 12947, *C. prolata*, CANB 740505; 25.xi.2006, same locality, John Whinray No. 12957, one *C. prolata* CANB 780234 and two *C. vulgaris*, CANB 780234.

Other possible records

A single *Caladenia* plant was noticed elsewhere in the jumble but was not sighted again. A group of nine *Caladenia* plants was found on the western edge of the jumble on 24 October 2006. They rose from a mat of the common Filmy-fern near where animals used a track down the patch's eastern edge. An attempt was made to cover the plants by using fallen shrubs but there were few to hand. The partial cover did not stop the animals, which feed by scent at night, from reaching the plants. By 14 November, five leaves remained and some of

them had been nibbled. There were no buds. As none has been found flowering, they have not been added to the total. It seems likely, however, that they could include the Fertile *Caladenia*.

A group of about 40 *Caladenia* plants was found on the crown of a downstream boulder on 12 November 1998. The locality has since been checked more than 15 times. The number of plants surviving by the flowering period each year depends on whether or not the brushtail possums can reach them. The crown was made accessible during this period when a large shrub fell against the boulder. At least 30 leaves were noticed on 25 June 1999 but only 18 remained on 27 November that year. Fifty-nine plants were counted on 5 October 2006 and it seemed that there would be a general flowering. However, only eight had buds by the 24th of that month. Just six plants remained by 14 November. Flowering plants have been found on only two occasions. As all were pink Summer Fingers, they have been excluded from the total given above.

Specimen (of two)

14.xi.2006 On a boulder in a gully of the western slopes of Strzelecki Peaks, Flinders Island. John Whinray No. 12945 *Caladenia vulgaris*, CANB 740503.

Comparison with mainland habitats of the Fertile *Caladenia*

The Tasmanian rainforest habitat contrasts strongly with that of the Australian mainland. In Victoria the orchid is 'Primarily a plant of near-coastal closed scrublands and open forests, where it grows in sand and clay loams. Also found in woodlands on sandy soils and seasonally inundated, heavy clay loams.' (Backhouse and Jeanes 1995: 96). It is 'Widespread in the wetter districts...' of South Australia and is 'Particularly common in leaf and bark litter under pink gum, cup gum and coastal mallee in scrubs and woodland in a variety of soil types.' (Bates 2011: 13).

Discussion

While the granite jumble was missed by the bushfire of 1960, all the understorey in its vicinity was burnt. The prior major fire on the Strzelecki massif was in c.1939 and lasted for about a month (Athol Dart, pers. comm. March

1965). The absence of rainforest shrubs such as Hazel Dogwood and Musk *Olearia argophylla* from the gully could be the result of fires and the intensive nuzzling by the feral pigs. Nearly all of the accessible ground in the gully, and on the balance of the slopes, has been worked by them repeatedly, to as much as 45 cm deep. Most of the other orchids surviving in soil are at the edges of the track, hardened by thousands of visitors.

Pigs have nuzzled to within a few centimetres of the eastern edge of the major extant occurrence of the Fertile *Caladenia*. They have yet to work the damp or muddy ground of the spring. There is no apparent reason for their failure to use the western extension of the site, amongst Tall Cutting-rush. There seems to be no cause, except for the repeated nuzzling and the eating of corms, for the Fertile and Common *Caladenias* to be so restricted in range. Further diminution of their habitat at the major site could be prevented by frequent baiting of a substantial area around it. If carried out consistently this could even allow the orchids to spread slowly in the adjacent soil.

The author has spent some 30 days rambling on the peaks' western slopes without finding any further trace of the Fertile *Caladenia* and Summer Fingers. Parts of the lower southern slope of the peaks have been worked on several occasions without even one *Caladenia* leaf being noticed. Pink Fingers *C. carnea* were not found higher to the west of the peaks than c. 290 m. The Fertile *Caladenia* and Summer Fingers were at about 305 m. The main occurrence of the Elegant *Caladenia Caladenia cracens* was on the western side at c. 525 m and just one plant was noticed at 700 m. The Alpine *Caladenia C. alpina* occurred from about 700 m to 782 m on the four peaks and at c. 690 m on the crest just south of them.

Mt Munro is the summit of Cape Barren Island, the second largest island of Banks and eastern Bass Straits. Its summit is 711 m high and Big Hill, the massif's north-western knoll, rises to 490 m. The author has been somewhere on the massif just over 80 times since 1964 with-

out noticing any *Caladenias* above about 250 m. The plants there, and at c. 225 m, were Greencomb Spider-orchids *C. dilatata*.

The sole record of a *Caladenia* at a higher elevation on the island is at about 500 m in the upper south-western crevice of Higher Double Peak, the summit of a dissected plateau south-east of Mt Munro. Thirty plants of the Elegant *Caladenia C. cracens* were counted there in late November 2008.

The status of the Fertile *Caladenia* in Tasmania

The Fertile *Caladenia C. prolata* is scheduled under the Tasmanian *Threatened Species Protection Act 1995* as 'endangered'. The mixed occurrence of Fertile *Caladenias* and Summer Fingers at the major site of the western slopes of Strzelecki Peaks totalled a little over 100 plants. While the Fertile *Caladenia* was probably the more common taxon, its scheduling as endangered is thoroughly appropriate.

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References

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